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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,291	06/12/2001	Aviad Zlotnick	36358	3021

7590 10/17/2005
GREENBLUM & BERNSTEIN, P.L.C.
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RESTON, VA 20191

EXAMINER

LAROSE, COLIN M

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/878,291	Applicant(s) ZLOTNICK ET AL.	
	Examiner Colin M. LaRose	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-12,15-22 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12,15-22 and 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 August 2005 has been entered.

Priority

2. In the Final Rejection dated 4 February 2005, acknowledgement of foreign priority was erroneously indicated on the Office Action Summary. Foreign priority documents have not been submitted for this application.

Response to Amendments and Arguments

3. Applicant's amendments to independent claims 1, 11, and 21 are sufficient to overcome the previous grounds of rejection. However, new grounds of rejection in view of newly discovered prior art are presented below.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5-8, 11, 12, 15-18, 21, 22, and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,655,029 by Rutenberg et al. ("Rutenberg").

Regarding claims 1, 11, and 21, Rutenberg discloses a method/apparatus/computer-readable medium for image processing, comprising:

capturing one or more images of a multiplicity of three-dimensional elements that are not predefined symbols or groups of predefined symbols (camera 12, figure 1, captures images of a multitude of three-dimensional human cells);

analyzing the one or more images so as to determine a respective classification for each of the multiplicity of elements in the images (column 3, lines 55-65: cells which meet criteria conforming to possibly malignant or pre-malignant cells are classified as such);

displaying together for a human operator a plurality of the elements that have the same classification and were found at different locations in the one or more images (figure 2: cells that have been classified as possibly malignant or pre-malignant are displayed for an operator); and

receiving an input from the operator indicative of whether an error occurred in the classification of any of the displayed elements (column 4, lines 18-43: operator uses e.g. a mouse to designate which cells do not have an error in classification – i.e. the operator identifies which cells were correctly classified as possibly malignant or pre-malignant).

Regarding claims 2, 12, and 22, Rutenberg discloses the elements comprise pictures of three-dimensional image features (e.g. Rutenberg's elements are pictures of 3-D cells).

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Regarding claims 5, 15, and 25, Rutenberg's analyzing the one or more images comprises carrying out a process of automated image analysis using a computer (see column 3, lines 55-65).

Regarding claims 6, 16, and 26, Rutenberg discloses displaying the plurality of the elements comprises dividing the one or more images into segments, such that one of the plurality of the elements is contained in each of the segments, and displaying the segments containing the elements (see figure 2).

Regarding claims 7, 17, and 27, Rutenberg discloses displaying the segments comprises displaying the segments in a grid pattern on a computer display (see figure 2).

Regarding claims 8, 18, and 28, Rutenberg discloses displaying the segments comprises displaying the segments on a computer display, and wherein receiving the input comprises sensing a selection of one of the plurality of the elements on the computer display, wherein the selection is made by the operator using a pointing device associated with the computer (see column 4, lines 18-43).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 9, 10, 19, 20, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,655,029 by Rutenberg et al. ("Rutenberg") in view of U.S. Patent 5,455,875 by Chevion et al. ("Chevion").

Regarding claims 9, 19, and 29, Rutenberg discloses that selection of the one of the elements indicates that the classification of the element is *not* erroneous (see column 4, lines 18-43: operator uses e.g. a mouse to designate which cells do not have an error in classification – i.e. the operator identifies which cells were correctly classified as possibly malignant or pre-malignant).

Chevion discloses a system for inspecting classification errors in alphanumeric characters. Similar to Rutenberg, Chevion generates a grid (figure 6) of similarly classified elements. The operator is instructed to inspect the elements to determine which elements were classified correctly and which were classified incorrectly. The primary difference between Chevion and Rutenberg is that Chevion's operator selects those displayed elements which were erroneously classified, whereas Rutenberg's operator selects those displayed elements which

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were not erroneously classified. This apparently owes to the fact that there are relatively few expected classification errors in Chevion's OCR classification system, whereas there should be relatively few expected positive classifications in Rutenberg's malignant cell classification system. One skilled in the art would have recognized that both types of operator interaction – pointing out errors vs. pointing out non-errors – are essentially equivalent methods for parsing out erroneously classified elements from correctly classified elements. Whether errors or non-errors should be designated by the operator depends on the specific application and the proportion of expected errors to non-errors by the automated classification routine, and designating the errors, as taught by Chevion, rather than the non-errors, as taught by Rutenberg, would have been an obvious expedient, especially in light of the fact that Rutenberg teaches his system is applicable to a broad range of applications (see e.g. column 8, lines 54-61).

Regarding claims 10, 20, and 30, Chevion discloses prompting the operator to correct the erroneous classification (i.e. the user is prompted when the grid of elements is displayed as in figure 6).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general

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nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML
Group Art Unit 2627
12 October 2005



VIKKRAM BALI
PRIMARY EXAMINER